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## Information for Home Builders

*The Atlas Portland Cement Company*

*30 Broad Street, New York      Corn Exchange Bank Bldg., Chicago*

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## Your home

The home you are planning to build, you want to be distinctively *your* home. It must be beautiful, yet practical, and must express your individual taste and refinement. You want the advantages of the latest developments in construction and all the other desirable qualities that can be put into a home, so that it will give you lasting satisfaction, with no regrets.

Therefore, we believe that you will be interested in a book which considers the desires of the prospective home builder and which presents, in an impartial way:

1. The elements required in a thoroughly satisfactory home
2. The different kinds of materials and constructions
3. The advantages and disadvantages of each kind
4. The newest development in artistic home construction

so that you may consider all of the possibilities before deciding which form of construction is best for you.

That is the purpose of this book.

Before making your decision, you will of course discuss the matter thoroughly with your architect. His study of your requirements and his broad experience will help you to secure a home which will give you the things you desire to a greater degree than is possible in any other way.





One of the new exquisite effects in home construction that can be secured by the use of white stucco toned with aggregates such as colored marble and granite screenings and colored sands and gravel. Instead of being absolutely uniform, the color is variegated or mottled, giving charm, individuality and richness to the home at almost no extra cost.

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## What you want

The principal qualities which are desired in a home and which determine therefore to a great extent the choice of material or kind of construction are:

|                             |                    |
|-----------------------------|--------------------|
| Beauty                      | Resistance to fire |
| Durability                  | Low first cost     |
| Resistance to heat and cold | Low upkeep         |

The principal kinds of construction which offer the advantages desired in greater or lesser degree are:

|       |                |                     |
|-------|----------------|---------------------|
| Wood  | Stone          | Reinforced Concrete |
| Brick | Concrete Block | Stucco              |

No one of these materials offers all of the desired advantages in the fullest degree. Therefore let us consider them all, stating the advantages and disadvantages of each, so that you will know which will give you the best average of the qualities you wish.



## Wood

This is the most common form of construction. It is most understood by builders, easiest to build, lowest in first cost, and can be made very attractive.

On the other hand it offers no resistance to fire, either from within or without, and is hard to keep warm in winter and cool in summer. Its durability and continued attractiveness depend more upon frequent and thorough painting than any other construction.

## Brick

Homes of brick are of two general kinds:

1. Plain brick which depends largely for its beauty upon decoration with stone or wood
2. Fancy or tapestry brick which like stone has a decided beauty in itself

A well-built brick home is warm in winter and cool in summer. It lasts. Repairs and painting costs are low. It gives good protection against fire from the outside, especially if the roof is of slate or tile.

Plain brick costs quite a little more than wood, and fancy or tapestry brick is even more costly; but beautiful and satisfactory homes are built with both.



## Stone

Stone possesses in a high degree most of the qualities desired by the house-owner—beauty, permanence, fire protection, winter and summer comfort, low cost for repairs, etc. However, the very high first cost for material and labor has largely limited the use of stone to expensive homes, except where stone is plentiful and is close at hand. Stone is monumental in character and therefore requires considerable ground for a proper setting.

## Concrete Blocks

This form of construction is more costly than wood, but cheaper than brick. It is durable, requires no painting or upkeep, and affords protection against fire from the outside. It makes a cool house in summer, and a warm one in winter. It is simple and substantial rather than beautiful, but pleasing effects are possible, especially if used in conjunction with brick or wood.

## Reinforced Concrete

A reinforced concrete house, if built with fireproof floors and roof, is safe against fire from within as well as without, secures lowest insurance rates, is the most permanent house that can be built, and requires almost no upkeep. It also offers possibilities of good design in simple mass effects at about the same cost as brick; but elaborate designs increase the cost considerably.

A house is not really fireproof unless the walls, floors and roof are all constructed of fireproof material. Fireproof walls and roof give a great deal of protection against fire from the outside; but, as most fires start from the inside, fireproof floors are also necessary for complete protection.

## Stucco

Good stucco is beautiful and offers a wide opportunity for individuality in design and treatment. It is lasting. It is warm in winter and cool in summer. It affords considerable protection against fire from the outside and in some forms of construction is completely fireproof.



The first cost of a stucco home is low—almost as low as all-wood construction. Upkeep is very low—no painting is required except for wood trim.

Its disadvantage is that, if poorly built, it may crack. This is largely a matter of accepting your architect's recommendation for good construction and backing him up at all times.

Stucco is a very old and permanent type of construction. Some of the stucco built by the Romans two thousand years ago is still standing—likewise stucco homes built by the Spanish missionaries in the Southwest several hundred years ago. It also has been used extensively for a long time in Spain, Italy and South America.



### What Stucco is

Stucco is a mixture of Portland cement, sand, lime and water worked into a plastic mass and used as follows:

Stucco on wood lath (with wood sheathing)  
Stucco on metal lath (with or without sheathing)  
Stucco on hollow tile

Stucco on concrete  
Stucco on brick

Satisfactory results have been secured with all of these methods, but some afford greater fire protection and are more durable than others.

### Stucco on Wood Lath

This is the cheapest form. It costs less than brick and almost as little as wood. It is used where low first cost is a dominant consideration.

The disadvantage of stucco on wood lath is the possibility of cracking caused by the opposite way in which the wood and stucco are influenced by changes of temperature. With a rise in temperature the stucco expands, whereas the wood loses moisture and shrinks. In spite of this fact, stucco on wood lath has given satisfaction in many instances.

### Stucco on Metal Lath

1. Metal lath on wood sheathing
2. Ribbed metal lath without wood sheathing

If metal lath on wood sheathing is used, it is subject in degree to the same objection as the wood lath construction, namely the opposite action of the wood sheathing and the stucco in expansion and contraction. But it is a better form of construction than stucco on wood lath.



By the use of brownish yellow sand, this white cement stucco is given a tone that is soft, warm and rich and not unlike the old Colonial stucco, aged and mellowed by nature. It should be looked at from a distance of several feet to get the full effect of color and texture.

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In quarrying valuable colored granites and preparing them for shipment, there is considerable waste in "screenings" or small, pebble-size chips. These "screenings," beautiful in color, are used to give white stucco charming variegated tones with individuality and warmth.



If metal lath with high ribs is used, no wood sheathing is required. The ribbed lath is attached direct to the studs or supports, with the ribs inward, in such a way as to allow independent freedom of movement in expansion and contraction. By this method the possibility of cracking is avoided. The ribs also act as reinforcing and give great strength to the wall.

In this type of construction, the stucco is applied on the inside of the metal lath (between the studs) as well as on the outside. The result is a strong two-inch monolithic wall which affords protection against fire from the outside and keeps out the heat in summer and the cold in winter.

### Stucco on Hollow Tile

In this method, hollow tile blocks are used in place of wood studs and sheathing and the stucco is applied directly on the hollow tile. If fireproof roof and floors are used with hollow tile walls complete protection is afforded against fire.

The cost of stucco on hollow tile is somewhat higher than the other forms of stucco construction (except stucco on brick) but it is one of the best types and its use is increasing.

### Stucco on Concrete

Stucco can be applied on both reinforced concrete and concrete blocks, resulting in a permanent and fireproof construction at a trifle lower first cost than stucco on hollow tile and at about the same first cost as stucco on ribbed metal lath (without wood sheathing).

### Stucco on Brick

This form of construction offers about the same degree of fire protection as stucco on hollow tile, but being somewhat more expensive it is seldom used for new homes.

Stucco is often used, however, for "overcoating" or renovating old brick houses.



## The Charm of Color Stucco

Color stucco, secured by the addition of colored aggregates in the final coat, but without any artificial coloring matter, is a new development in home building. It affords the beauty, warmth, variety and character shown by the color panels in this book. The color is permanent.

Originally all stucco houses were gray, due to the gray color of the Portland cement. The advent of white Portland cement made it possible to get exquisite white tones; and, later, to color this white stucco with artificial matter called mineral pigments.

As a result, many beautiful homes were built in pure white and soft, warm tones. In both cases, however, the tone was uniform, and, though pigments gave it warmth, it had a certain monotony. This naturally led to a desire for stucco homes warm and varied in tone and charming in texture and surface.

After considerable study, it became apparent that the solution lay in using white cement and colored aggregates, such as yellow, buff or pink marble screenings; warm gray or light green granite screenings; yellow or red gravel and sand, etc.

The "screenings" are the small pebble-size pieces chipped from valuable marbles and granites when they are being quarried and prepared for shipment. These screenings are beautifully colored by nature and, instead of being flat and uniform in tone, are varied in color.

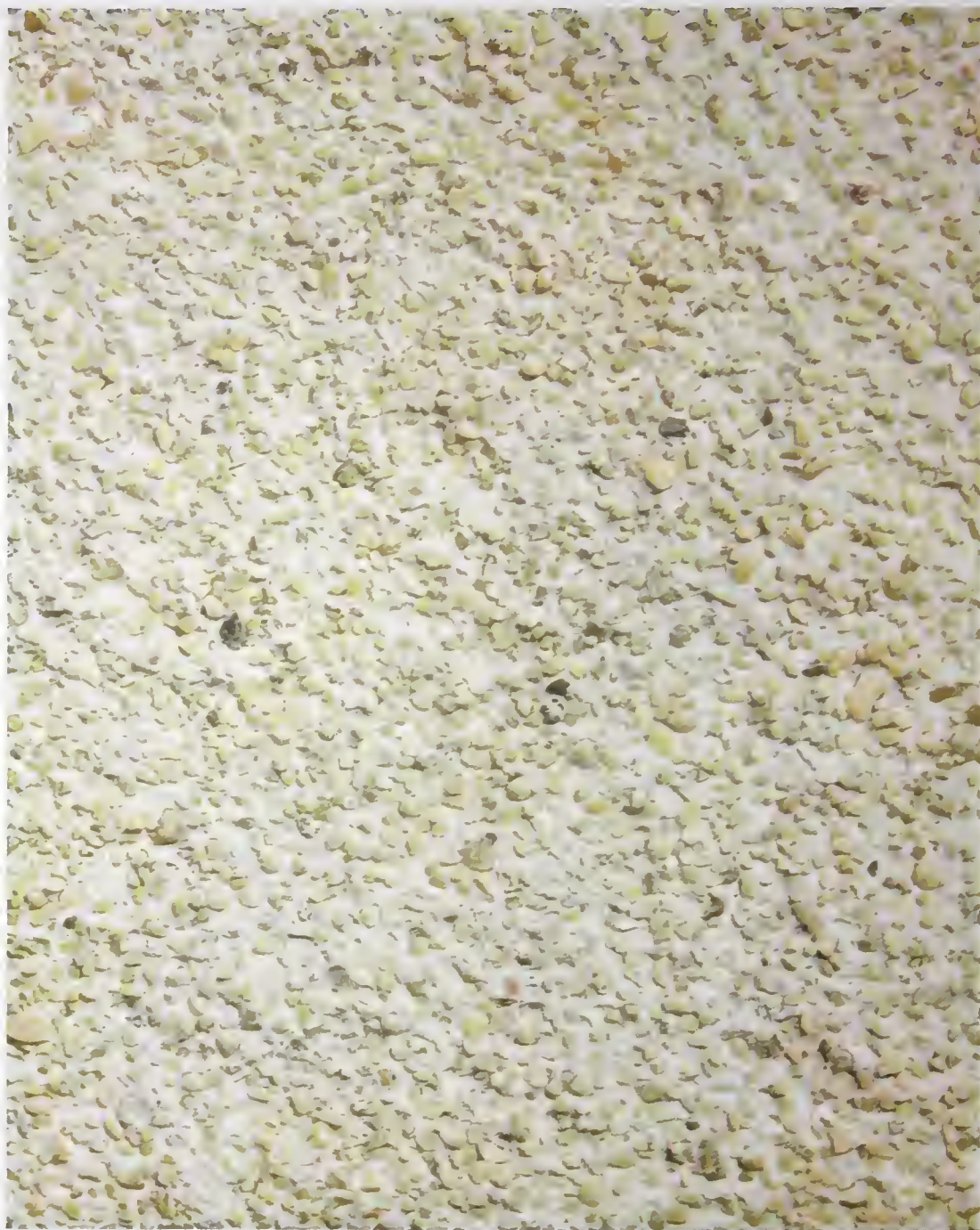
Therefore, the general tone effect, using these aggregates, may be a warm buff, brown, red or green, with the color variegated or mottled. This makes possible wonderfully rich and artistic effects with unlimited opportunities for individuality.

It probably will surprise you to learn that the quantity of colored screenings or aggregates needed to secure these beautiful effects for the average size home is approximately only two cubic yards. The cost, therefore, is insignificant, whether the aggregate is secured locally or from a distance.

By looking at these reproductions from a distance of a few feet, as well as close up, you will see how the color is varied or blended, by the natural variation in the aggregates, and that the surface and texture vary too, as shown on page 13, adding still greater interest and richness. These panels give you some idea of the beauty of color stucco; but unless you have seen one of the few color stucco





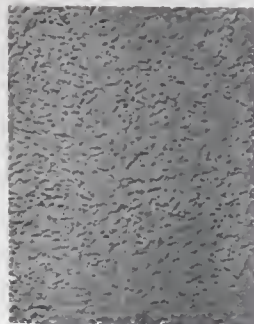


A color effect secured by yellow gravel thrown on white stucco and then pressed in. The white cement stucco brings out the true color value of these colored pebbles, resulting in a rich, warm, mellowed tone that even years of ageing could not give to plain white stucco.

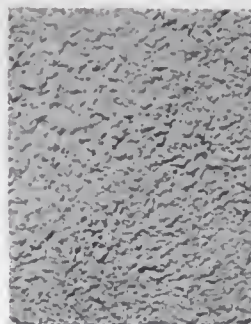
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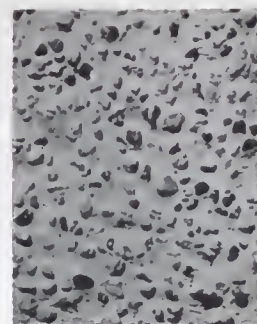
Spatter Dash Stucco Finish



Floated Stucco Finish



Stippled Stucco Finish



Pebble Dash Stucco Finish

houses that have just been completed, it will be hard for you to picture the full charm of this new advance in home building.

### Summary

For beauty in very large houses, color stucco, stone, and fancy brick stand first. For smaller homes, stucco gives the greatest range of individuality, with wood and fancy brick second.

For durability, resistance to heat and cold, and fire protection, concrete stands highest, stone is second, better forms of stucco third; next brick, and last, wood.

For low first cost, wood is the cheapest, stucco is next, then concrete blocks, brick, and reinforced concrete, and last, stone.

For low upkeep (painting and repairs), reinforced concrete, stone, stucco, concrete blocks and brick are about equal. Wood is very costly.

Considering first costs, repairs, beauty, individuality, and all of the other desirable elements entering into home construction, stucco offers the best combination of advantages for most homes. This accounts for the recent and very rapid growth of stucco construction.

It also accounts for the increased use of stucco for private garages. Stucco garages are attractive and require no painting and no repairs. They afford considerable fire protection—important because of the value of your motor car.

### Your Architect

Of course, you will retain an architect. He is familiar with all types of home construction and arrangement, knows what to do and what not to do, and after a study of your desires will come nearest to giving you the beautiful home—and the kind of home—you wish. He is familiar with the work and experience of the dif-





ferent contractors and will know better than to be governed by price alone. He also knows where to economize and where not to economize; he will save you money, avoid mistakes, and relieve you of all details.

## Atlas Portland Cement

In every type of home construction, Portland cement is used in some degree. As manufacturers of the most-used Portland cement, we have come in actual contact with all the different types of construction. The information given on the advantages and disadvantages of the various constructions is the result of this experience. You are, therefore, in position to discuss these different types with your architect with understanding, and to appreciate the wisdom of his recommendation for good construction and good workmanship, rather than to decide entirely upon price or any other single consideration.

Whichever type of construction you choose, we naturally would like to have you use Atlas Portland Cement, "The Standard by which all other makes are measured."

Atlas is high-grade, uniform and reliable. These qualities have commended it to architects, engineers, and contractors to such an extent that it is the leading and most-used cement in the world. Over 7,500,000 barrels have been used by the United States Government for the Panama Canal.

## Atlas-White

Non-Staining Portland Cement

Atlas-White is the cement that has made color stucco possible. It is a pure white, non-staining Portland cement and shows the true color values of color aggregates and mineral pigments. The warm, mellow buffs, creams and browns so much desired, and the interesting variation and blending of color tones and textures illustrated in this book are results of the use of Atlas-White. Atlas-White is also used to secure a beautiful, pure white finish for stucco homes, garages, pergolas, and in making fountains, sun dials, garden seats, etc. It affords a very effective background for trailing vines, shrubbery and evergreens.

Atlas-White, because of its non-staining quality, is particularly suitable for pointing and setting stone, tile and brick, giving a beautiful white joint that will not stain the stone, tile, or brick.



WHATEVER the kind of home you build, the results to be secured necessarily depend in a measure upon good workmanship. Any one of them can be poorly built. Make up your mind to build well, because a well-built house will require less repairing and upkeep and will give far greater satisfaction.



## Further Information

We have endeavored to include in this book the principal points of the different kinds of materials and constructions. Possibly you will want further information on some particular point. We shall be glad to furnish any information desired regarding any of the types of construction described herein. We shall also gladly send you any of the following books on request:

"BUILDING A BUNGALOW"

"CHOOSING THE GARAGE"

"NEW HOMES FOR OLD"

"CONCRETE FOR THE FARM"



*The Cement that made  
color stucco possible*

*The Atlas Portland Cement Company*

*New York Chicago Philadelphia Boston St. Louis Minneapolis Des Moines Dayton*